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Optical properties of relaxor ferroelectrics

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Abstract

The optical absorption spectrum, luminescent emission and photoconductivity were investigated in single crystal PbMg1/3Nb2/3O3 and in the Pb0.91La0.09(Zr0.65Ti0.35)O3 ceramics in the wide temperature region. The spectrum of the luminescence correlates with spectrum of photoconductivity emission. The position of the maximum of the luminescence emission indicates the origin of the charge carriers for the emissions from the defect centers. On the basis of these data the properties of the local centers were found, and phenomenological approach to a relaxor theory is discussed.

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Keywords

Optical properties, PLZT, PMN, Relaxor ferroelectrics